

ABSTRACT
INTERCONNECT-AWARE INTEGRATED CIRCUIT DESIGN

In a system 10 for designing an integrated circuit, a preliminary design of the integrated
5 circuit is defined and critical interconnect lines in the preliminary design are identified. Further,
any critical interconnect lines which are affected by crossing lines in the preliminary design are
identified, and a transmission line model 35 is defined to represent each critical interconnect line.
A layout design of the integrated circuit, comprising circuit components and parameters thereof,
is then defined using the preliminary design and the transmission line model 35 for each critical
10 interconnect line. Component parameters are then extracted from the layout design for simulation
of the design using the extracted component parameters. During this design process, for each
transmission line model 35 representing a critical interconnect line affected by a crossing line, an
environment terminal 36 is provided. The environment terminal 36 comprises a connection to the
model 35 via at least one circuit component representing the effect of the crossing line on the
15 model. The environment terminal 36 is connected to the appropriate crossing line in the
integrated circuit design, whereby crossing line effects are accommodated in the design process.

(Figure 3)